Software Licensing
Follow-Up Audit

EXECUTIVE SUMMARY

The Internal Audit Department conducted a follow-up audit of the Software Licensing Audit dated January 31, 2006. The original audit report contained one finding with agreed upon recommendations and management action plans. Based on our review, the finding has not been addressed as of the implementation due date.

Finding No.	Description of Original Finding	Status
1	The City of El Paso has a documented Software Licensing Policy that is broad in nature and sets forth the policy, and includes a disciplinary action component. However, the current City Software Licensing Policy does not have a monitoring component as part of the policy. Therefore monitoring procedures are lacking within the Information Technology Department's Software Licensing Policy. This lack of authority makes it difficult to enforce the Software Licensing Policy on an organization wide basis. As a result of a lack of a monitoring component within the Software Licensing Policy the following was noted: - Formal software licensing policy. - Limited periodic reviews of contracts or software license agreements are conducted to ensure compliance. - Limited training program available for city personnel on software licensing compliance. - Standard software purchasing procedures exists, but variations exist due to software needs. - Limited periodic software audits. - Varied inventory of software installed on City owned computers. - No policy in place regarding the downloading of Internet based software.	In-Progress

For a detailed explanation of the finding and the current observations please refer to the finding contained in the body of this Audit Report.

Based on the results of this follow-up audit the finding is in-progress of being implemented. Therefore, a second follow-up audit will be necessary to ensure that the original finding has been addressed.

BACKGROUND

During the Software Licensing Audit, a finding with several underlying issues was identified which relate to the monitoring component of the City Software Licensing Policy. The issues concerned the monitoring of software installed on City-owned computers; documentation and management of software licenses to ensure proper maintenance and disposition; policies and procedures to govern the acquisition, downloading, distribution, and use of licensed software; and training of City personnel on software licensing compliance.

The development of software by individuals, companies, and governments is usually an effort that involves time, financial investment, and the creative ideas and talents of development engineers, writers, and designers. Copyright protection serves to encourage, support, and reward the creative work of software inventors and owners. It secures the right of software inventors and owners to receive compensation and recognition for their intellectual property. Therefore, computer software, like any other creative work, is protected by United States Copyright Laws under U.S. Code Title 17 and 18 (*Copyrights* and *Crimes and Criminal Procedures* respectively).

Many organizations do not manage software as they would any other valuable asset. Poor software management can cost an entity not only in terms of legal and financial risk, but also in terms of lost efficiency and productivity. When software is purchased, the buyer does not become the owner of the copyright. Instead, the buyer purchases the "right" to use the software under certain restrictions imposed by the license accompanying it.

United States Code Title 17 and 18 outlines the rights of intellectual property owners as well as penalties for the pirating of computer software. Employers can be held liable for the actions of its employees if acting within the scope of their duties. There are various types of piracy of computer software and two of the more common ones are; 1) *end-user piracy* and 2) *internet piracy*.

1. Many computer users are unknowingly guilty of end-user piracy. For instance, if a City employee makes a copy of software or shares an installation CD without buying new licenses that would be considered end-user piracy. Other examples of end-user piracy are; when one licensed copy is used to install a program on multiple computers or servers, over-installing software for use beyond the licensed quantity, or using the software on more "designated computers" than licensed for. Without the correct number of licenses in place, the City would not be operating within the law. Furthermore, the City would be ineligible for support, training, or future upgrades on the unlicensed copies of software.

2. Internet piracy occurs when software is illegally downloaded from the Internet. Pirated software downloaded from the internet has a good probability of being corrupt, impossible to register (which could make it unusable), and/or infected with malicious code (spyware or viruses).

If the City of El Paso were accused of pirating software, the City could be held liable under both civil and criminal law. If a copyright owner brings a civil action against the City, the penalties can be up to $150,000 for each program copied. The U.S. government can also criminally prosecute the City, and if convicted, can be fined up to $250,000, include a sentence of up to five years in jail, or both. It is imperative that the City ensure that each and every copy of a software program (such as Microsoft Windows or Office) be accounted for and properly licensed.

SCOPE

The objective of this follow-up audit was to ascertain if management implemented corrective actions to address the items identified in the Software Licensing Audit Report dated January 31, 2006.

The follow-up audit period will be based on actions accomplished by management as of June 9, 2006, the implementation date stated in the audit report.

The audit was conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing* issued by the Institute of Internal Auditors.

ORIGINAL FINDINGS, ORIGINAL RECOMMENDATIONS, MANAGEMENT'S RESPONSE TO ORIGINAL FINDINGS, CURRENT OBSERVATION, AND STATUS

Based on the results of follow-up test work, each original finding recommendation will be designated with one of the following four status categories:

Implemented	The finding has been addressed by implementing the original corrective action or an alternative corrective action.
In Progress	The corrective action has been initiated, but is not complete.
Not Applicable	Recommendation is no longer applicable due to changes in procedures or changes in technology.
Not Implemented	Recommendation was ignored, there were changes in staffing levels, or management has decided to assume the risk.

Finding 1

The City of El Paso has a documented Software Licensing Policy that is broad in nature and sets forth the policy, and includes a disciplinary action component. However, the current City Software Licensing Policy does not have a monitoring component as part of the policy. Therefore monitoring procedures are lacking within the Information Technology Department's Software Licensing Policy. This lack of authority makes it difficult to enforce the Software Licensing Policy on an organization wide basis. As a result of a lack of a monitoring component within the Software Licensing Policy the following was noted:

Software Licensing Objective	Status
1. Is there a formal software licensing policy?	Yes.
2. Periodic reviews of contracts or software license agreements are conducted to ensure compliance?	Limited reviews by IT divisions.
3. Is a training program available for city personnel on software licensing compliance?	Limited.
4. Standard software purchasing procedures exists?	Procurement policy and procedures exist. Variations exist due to software needs.
5. Does Information Technology conduct periodic software audits?	Limited.
6. Is there an inventory of software installed on City owned computers?	Varies by IT division.
7. Is there a policy in place regarding the downloading of Internet based software?	None.

Recommendation

The Information Technology (IT) Department should establish a monitoring requirement as part of the existing Software Licensing Policy. In addition to the monitoring component, we recommend the IT Department bring together its three divisions in a process improvement initiative to help create a set of Standardized Operating Procedures to enforce the monitoring requirement. These procedures should be disseminated to City of El Paso management and staff.

Management's Response

We are making preparations to fully implement the Computer Associates (CA) Asset management modules. This is a set of applications that the City already owns and which are being used in a limited capacity to monitor what applications are installed on City owned information processing equipment. Utilizing CA Argis in conjunction with other CA modules will allow for documentation and management of software at the user level and throughout the city. Information vital to license management will be available on demand to provide for monitoring, inspection, and reporting of license usage. CA Argis will also allow IT asset tracking from the time of acquisition and throughout the products life cycle insuring proper maintenance and disposition of licensed assets.

To provide IT greater control over what software is installed on city PC's, IT will reacquire and implement the Websense application to provide another layer of security. Websense is proven software that will prevent users from downloading unauthorized applications from the Web either intentionally or as part of authorized downloads such as email.

We will develop standardized policies and procedures governing the distribution, access, and use of licensed assets, which are critical to a comprehensive license management as well as an effective security program. These standardized policies and procedures will also clearly define the enforcement process for violation of rules and restrictions for licensed and classified software assets. Finally, the policy will mandate a comprehensive and ongoing training and information dissemination process to insure both users and management are aware of all requirements and restrictions pertaining to licensed and classified software resources.

Responsible Party

Walter Townsend, Special Projects Coordinator

Implementation Date

Approved Licenses Management Policy – June 9, 2006
Complete Documentation

Current Observation

Within the last year, the Information Technology (IT) Department has experienced a change in management, as well as, turnover of other key IT personnel. One of which, was the responsible person for implementing the recommendations and management action plans agreed upon in the original audit report. The IT Department has encountered a software contract issue with its vendor, Contract Associates. The software package was planned to take a key role in the implementation of the management action plans. The contract issues with the software package and the change of key IT personnel have been the causes for the recommendations not to be addressed as of the due date.

The finding with its underlying issues was not fully implemented as of the target implementation date stated in the original audit report. The Information Technology Department is in the process of implementing corrective actions that will address the previously identified finding and underlying issues.

The management action items have a new target implementation date of August 1, 2007.

Status

In Progress

INHERENT LIMITATIONS

Because of the inherent limitations of internal controls, errors or irregularities may occur and not be detected. Also, projections of any evaluation of the internal control structure to future periods are subject to the risk that procedures may become inadequate due to changes in conditions, or that the degree of compliance with the procedures may deteriorate.

CONCLUSION

Based on the results of this follow-up audit, the original finding was not implemented as of the agreed to implementation date, but is in the process of being addressed by Information Technology Department management. The correction of the issues identified in the Software Licensing report is important and top priority for the current IT Management. Therefore, we will perform a secondary follow-up audit at a later date. We wish to thank the Information Technology Department management and staff for their assistance and numerous courtesies extended during the completion of this follow-up audit.

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